



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,526	09/30/2005	Norbert Steidl	NY-HUBR-1286-US	6204
24972 7590 12/29/2006 FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT	PAPER NUMBER
			1714	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/29/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/551,526

Applicant(s)

STEIDL ET AL.

Examiner

Patrick D. Niland

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-78 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/05, 12/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

Art Unit: 1714

1. Claims 40-61, 69, and 71-78 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the homologues and derivatives described in the instant specification, does not reasonably provide enablement for all of the homologues and derivatives encompassed by the instant claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

A. A. The instantly claimed “derivatives” and “homologues read on an infinite number of compounds resulting from the potentially infinite number of derivations which can be performed on the recited compounds. It is noted that water and carbon dioxide are “derivatives” of the recited compounds of the instant claims derived from pyrolysis of the claimed compounds in oxygen. In re Wands has 8 criteria, (MPEP 2164.01(a)), as shown below.

(A)The breadth of the claims;

(B)The nature of the invention;

(C)The state of the prior art;

(D)The level of one of ordinary skill;

(E)The level of predictability in the art;

(F)The amount of direction provided by the inventor;

(G)The existence of working examples; and

(H)The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is noted that the instant claims read on all potential derivatives and homologues of the recited compounds which encompasses an infinite number of compounds (Wands factor A). The

specification does not describe how to make all such derivatives nor homologues nor how to select those derivatives or homologues from the infinite list thereof which will function as required in the instant invention (Wands factors F, G). It would require an infinite amount of experimentation to determine how to make all of the derivatives or homologues encompassed by the instant claims and another infinite amount of experimentation to determine which of these derivatives or homologues would function in the instantly claimed invention as required (Wands factor H). Chemistry is an unpredictable art (Wands factor E). The ordinary skilled artisan has not imagined nor figured out how to make all of the derivatives or homologues encompassed by the instant claim of “derivatives” and “homologues” yet (Wands factors C, D, E, F, G, and H). The enabling disclosure is not commensurate with the full scope of the claimed “derivatives” and “homologues”.

Claim 49 recites “substituted” which is not fully enabled by the instant specification for the same reasons given regarding “derivatives” and “homologues”. The instant specification does not describe all of the encompassed substituents, how to make them, and how to determine which will function as required in the instant invention. There are an infinite number of such “substituents” and it would therefore require an infinite amount of experimentation to make this determination, which is impossible.

B. The instant claims recite molecular weights with regard to the polymeric species (A)(i) without stating whether average molecular weight is intended and if so what type is intended. See a general polymer text for an explanation of this basic polymer concept. The instant specification does not enable a polydispersity of exactly one with regard to these polymer molecular weights which are not specified as being averages.

2. Claims 40-61, 69, and 71-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The instant claims recite molecular weights with regard to the polymeric species (A)(i) without stating whether average molecular weight is intended and if so what type is intended. See a general polymer text for an explanation of this basic polymer concept. It is therefore unclear what type of polymer molecular weight is intended.

B. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 53, 56, 57, 58, 59, 60, and 74 recites the broad recitation followed by a narrower range denoted by "preferably" or "such as".

C. It is unclear what is required by "in the form of" regarding claims 69-72. It is unclear whether the additionally recited or implied ingredients are required because they are not

Art Unit: 1714

specifically mentioned as required components or if the dispersion referenced, by itself, constitutes being "in the form" of the recited options.

D. It is unclear what is encompassed by the language "and also b) by preparing a polyurethane dispersion, wherein b1) reacting 2-50 parts by weight of the hydrophilic and solvent free macromonomer (A)(ii)...having two or more hydroxyl groups...". Particularly, it is unclear if "and also" requires that both steps a and b be performed where a gives the adducts of its full breadth and b gives the dispersions of its breadth or if step a is making the macromonomer (A)(ii) of step b. The lack of clarity results from the combination of the above grammar and the fact that b requires macromonomer (A)(ii) to have two or more OH groups while the full scope of a would not require this outcome, e.g. the larger molar amounts of the alkylpolyalkylene glycol which only contain one OH group, the lower molar amounts of diisocyanate and the lower amounts of a2, which need not have OH groups. Step a can produce NH terminal compounds, NCO terminal compounds, compounds having only one OH, etc. which do not meet the requirements of component (A)(ii) of step b. Thus it is unclear if step b references the compound of step a or if they are not related.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1714

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 40-78 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat.

No. 4501852 Markusch et al..

Markusch discloses polyurethane dispersions falling within the scope of those broadly claimed by the instant claims at the abstract; column 2, lines 4-68 which encompasses the instantly claimed polyisocyanates; column 3, lines 1-68, particularly 33-47 et seq. which encompasses the instantly claimed polyol of step b2; column 4, lines 1-68; column 5, lines 1-68, particularly 27-68, which encompasses the instantly claimed amounts of step b3; column 6, lines 1-68; column 7, lines 1-68, particularly 27-35 which falls within the scope of the instantly claimed macromonomer (A)(ii) with its further description at column 7, lines 54-68 and column 8, lines 1-6 and the molecular weight implied by the components and amounts thereof of this disclosure implies the instantly claimed molecular weight and monomodal MW distribution, which is the normal MW distribution for these types of compounds with its subsequent reaction with polyisocyanate falling within the scope of the instantly claimed step b1; column 8, lines 7-68; column 9, lines 1-68, particularly 4-18, 27-33, and 40-41 which discloses using no organic solvents; column 10, lines 1-68, particularly 19-68 which falls within the scope of the instantly claimed step b4; column 11, lines 1-68, particularly 60-68; column 12, lines 1-68, particularly 5-16 which falls within the scope of the instantly claimed step b5, 20-21 and 64-68, which falls within the scope of the instantly claimed step b 6; column 13, lines 1-68; column 14, lines 1-68, particularly 1-12 and 49-68; column 15, lines 1-68, particularly 14-26 which encompasses the instantly claimed amounts of water and particle sizes and 38-55; column 16, lines 1-68; and the remainder of the document. The amounts of ingredients, molar ratios, molecular weights and

Art Unit: 1714

other descriptions of the polyurethane of the patentee are such that the polyurethane of the patentee is expected to necessarily possess moieties falling within the scope and amounts of those of the polyurethane of the instant claims due to the manner in which these polyurethanes can be theoretically divided into numerous types of moieties that would necessarily mathematically fall within the scope of the broadly claimed components and broad amounts thereof. Given the reaction conditions, molar ratios, molecular weights of the reactants used, etc., the polyurethane of the patentee is expected to necessarily possess a molecular weight within the scope of the broad range of the instant claim 61. The dispersion of the patentee is an individual component which falls within the scope of the instant claim 69 as it could be used to coat insulation and finishing necessarily. The dispersion of the patentee could be added to any of the things mentioned in claim 70 and therefore reads on claim 70. It is not seen that the dispersion of the patentee does not take any of the forms of the instant claim 71 and cannot be used to paint a sports floor. The patentee's dispersion therefore falls within the scope of the instant claim 71. It is not seen that the dispersion of the patentee does not take any of the forms of the instant claim 72 and cannot be used coat any of these items. It is not seen that the binder and the fillers of the patentee do not meet the recitation of cement of claim 73. The patentee's dispersions and additives therefore read on the instant claims 72-73. Claims 74-77 are directed to compositions per se and it is not seen that the intended uses define over the compositions of the patentee, which otherwise contain all that is required of these claims. The amounts of column 16, lines 43-47 encompass the instant claim 78.

6. Claims 40-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 4501852 Markusch et al..



Markusch discloses polyurethane dispersions falling within the scope of those broadly claimed by the instant claims at the abstract; column 2, lines 4-68 which encompasses the instantly claimed polyisocyanates; column 3, lines 1-68, particularly 33-47 et seq. which encompasses the instantly claimed polyol of step b2; column 4, lines 1-68; column 5, lines 1-68, particularly 27-68, which encompasses the instantly claimed amounts of step b3; column 6, lines 1-68; column 7, lines 1-68, particularly 27-35 which falls within the scope of the instantly claimed macromonomer (A)(ii) with its further description at column 7, lines 54-68 and column 8, lines 1-6 and the molecular weight implied by the components and amounts thereof of this disclosure implies the instantly claimed molecular weight and monomodal MW distribution, which is the normal MW distribution for these types of compounds with its subsequent reaction with polyisocyanate falling within the scope of the instantly claimed step b1; column 8, lines 7-68; column 9, lines 1-68, particularly 4-18, 27-33, and 40-41 which discloses using no organic solvents; column 10, lines 1-68, particularly 19-68 which falls within the scope of the instantly claimed step b4; column 11, lines 1-68, particularly 60-68; column 12, lines 1-68, particularly 5-16 which falls within the scope of the instantly claimed step b5, 20-21 and 64-68, which falls within the scope of the instantly claimed step b 6; column 13, lines 1-68; column 14, lines 1-68, particularly 1-12 and 49-68; column 15, lines 1-68, particularly 14-26 which encompasses the instantly claimed amounts of water and particle sizes and 38-55; column 16, lines 1-68; and the remainder of the document. The amounts of ingredients, molar ratios, molecular weights and other descriptions of the polyurethane of the patentee are such that the polyurethane of the patentee is expected to necessarily possess moieties falling within the scope and amounts of those of the polyurethane of the instant claims due to the manner in which these polyurethanes

Art Unit: 1714

can be theoretically divided into numerous types of moieties that would necessarily mathematically fall within the scope of the broadly claimed components and broad amounts thereof. Given the reaction conditions, molar ratios, molecular weights of the reactants used, etc., the polyurethane of the patentee is expected to necessarily possess a molecular weight within the scope of the broad range of the instant claim 61. The dispersion of the patentee is an individual component which falls within the scope of the instant claim 69 as it could be used to coat insulation and finishing necessarily. The dispersion of the patentee could be added to any of the things mentioned in claim 70 and therefore reads on claim 70. It is not seen that the dispersion of the patentee does not take any of the forms of the instant claim 71 and cannot be used to paint a sports floor. The patentee's dispersion therefore falls within the scope of the instant claim 71. It is not seen that the dispersion of the patentee does not take any of the forms of the instant claim 72 and cannot be used coat any of these items. It is not seen that the binder and the fillers of the patentee do not meet the recitation of cement of claim 73. The patentee's dispersions and additives therefore read on the instant claims 72-73. Claims 74-77 are directed to compositions per se and it is not seen that the intended uses define over the compositions of the patentee, which otherwise contain all that is required of these claims. The amounts of column 16, lines 43-47 encompass the instant claim 78.

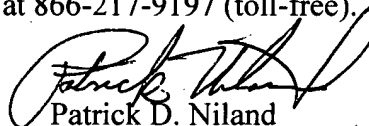
It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the above discussed combinations and ingredients and amounts thereof and processing steps in making the dispersions because they are encompassed by the patentee and would have been expected to give dispersion and coating properties as described by the patentee.

Art Unit: 1714

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick D. Niland  
Primary Examiner  
Art Unit 1714